6858

State of Utah
DEPARTMENT OF NATURAL RESOURCES

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Division of Oil, Gas and Mining

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November 25, 2015

Lantz Indergard
Lisbon Valley Mining Company
775 North Main Street
PO Box 400
Moab, Utah 84532

Subject: Initial Review of Reformatted Notice of Intention to Commence Large Mining Operations, Lisbon Valley Mining Company, Lisbon Valley Copper Mine, M/037/0088, San Juan County, Utah

Dear Mr. Indergard:

The Division of Oil, gas and Mining has reviewed the referenced, reformatted Notice of Intention to Commence Large Mining Operations (NOI) which was received July 7, 2015. The review was temporarily suspended pending the final decision on the Centennial Pit Backfill Proposal. The attached comments will need to be addressed before the Division approves the reformatted NOI.

Some of the comments refer to a "Waste Rock Management Plan" (WRMP) that does not yet exist as part of the NOI, except as the first part of the annual waste rock reports. The Division requests that a stand-alone WRMP be included in the NOI as an appendix. The Division believes the WRMP could be developed easily since most of it is included in the annual reports, but it should have some enhancements, including:

1) A sampling and analysis plan (standard from year to year);

2) A description of the rock types involved;

3) A description of how the various affected rock types are handled, and;

4) Map(s) that show where the waste rock is/will be deposited and capped.

By adding the WRMP into the NOI, it would save Lisbon Valley Mining Company (LVMC) work every year in the annual Waste Rock Report. The annual report could be reduced down to just the yearly analytical data, new maps showing deposition areas on dumps, and a summary of the analytical findings and disposal activities.

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UTAH DNR OIL, GAS & MINING

The comments are listed under the applicable Minerals Rule heading; please format your response in a similar fashion. Please address only those items requested in the attached technical review by sending replacement pages for the reformatted NOI using redline and strikeout text. After the notice is determined technically complete, the Division will ask that you submit two clean copies of the complete and corrected NOI. Upon final approval, the Division will stamp both copies approved and return one for your records.

Please submit your response to this review by March 1, 2016. The Division will suspend further review until receiving your response. Please contact Mike Bradley at 801-538-5332, Peter Brinton at 801-538-5258, or me at 801-538-5261 if you have questions concerning the review or if you would like to schedule a meeting to discuss it. Thank you for your cooperation in completing this permitting action.

Sincerely,

Paul B. Baker
Minerals Program Manager

PBB: mpb: eb
Attachment: Review
cc: Dave Pals, BML Moab FO (dpals@blm.gov)
Jerry Mansfield, SITLA (jmansfield@utah.gov)
P:\GROUPS\MINERALS\WP\M037-SanJuan\M0370088-LisbonValley-Summo\Final\REV1-6718-11242015.docx

INITIAL REVIEW OF REFORMATTED NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS

Lisbon Valley Mining Company
Lisbon Valley Copper Mine

M/037/0088
November 24, 2015

General Comments:

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
1	General	Please develop maps, figures and text with the understanding that they must be scanned and photocopied. This will require that hatching, line weights, colors, map labels, and text formatting should be legible when digitally copied.	OGM	

R647-4-104 – Operator Information and Surface and Mineral Ownership

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
2	Pg. 5 of 36	The Registered Utah Agent listed in the NOI does not correspond with what is shown in the Division of Corporations (DOC) listing (copy attached). Lantz Indergard may be a contact person for permitting and notices, but he is not an officer and, without a delegation of authority, is not authorized to sign surety documents and reclamation contracts. Please list officers of LVMC that can sign surety and reclamation contracts. Please supply the correct Registered Utah Agent or update LVMC's listing with the DOC if needed.	mpb	
3	Cover and Pg. 5 of 36	Mine Name on this NOI is shown as "Lisbon Valley Mine." Please identify it as the "Lisbon Valley Copper Mine" to differentiate it from two other mines and 18 exploration projects in the Lisbon Valley area with similar names.	mpb	

R647-4-105 - Maps, Drawings & Photographs

General Map Comments

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
4	Appendix B	Many of the "Additional Maps" in Appendix B are obsolete as they only show Stage I (drawn in 1996) and II (drawn in 2005) of the heap leach pad. The Division requests up-to-date maps of current conditions and future planned expansion in the updated NOI. The details sheets (2005) may still be applicable but should be reviewed to see if any modifications have been implemented that are not shown. Sheets numbered 1, 2 and 4 from 2005 and Drawings 1, 2, 3, 5, 7 and 8 from 1996 should be removed. These should be replaced with updated diagrams of the heap leach pad and process ponds that include the additional pond immediately south of the process ponds displayed on these older drawings.	mpb	

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
5	Appendix E	The topsoil and clay volume map has text that is very difficult to read or photocopy. Please make the text more readable. Please include call-outs on the map that describe how many cubic yards of topsoil are in each.	mpb	

105.1 - Topographic base map, boundaries, pre-act disturbance

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
6	Figure 1	Some of the features listed in the text on Page 7 as being shown on Figure 1 are not on the map. These include wetlands, transmission lines, pipelines, previously disturbed areas, and water wells. BLM land is not delineated on the map. GIS data with most of this information is available from the Utah State Geographic Information Database (SGID) at http://gis.utah.gov/data/. Water wells and water rights points of diversion data are available here: http://www.waterrights.utah.gov/gisinfo/wrcover.asp.	mpb	
7	Figure 1	The hatching in the legend for SITLA and private land does not match what is shown on the map. Also, please identify BLM lands, or state in the legend that all other land is BLM.	mpb	
8	Figure 1	Please show the as-built current alignment of the Lisbon Valley Road.	mpb	
9	Figure 1	The Waste Dumps and Clay hatching are too similar. Please differentiate these better.	mpb	
10	Figure 1	The Process ponds and Surface Water Retention hatching is likewise too similar. Please differentiate better.	mpb	

105.2 - Surface facilities map

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
11	Figure 2	Please include the locations of the reagent, oil, and fuels tanks used for storing the materials listed in the table found on page 29, *110.4 – Reagents*, and discussed in Appendix C. If some of these are stored inside buildings, please add boxes listing the stored materials with leaders to the appropriate buildings. A separate figure for the processing plant and service buildings may be an option for this.	mpb	

105.3 - Drawings or Cross Sections (slopes, roads, pads, etc.)

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
12	Omission	Please include cross-section diagrams that show the proposed final topography of the leach pad and all pits.	mpb	
13	Appendix E	Please call out the vertical exaggeration used on the cross section diagrams for Dumps A, B and C	mpb	

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
14	Omission	Provide a hydrology map which includes the following: 1) General facilities, pits and dumps 2) Ground surface elevation contours, 3) Natural hydrologic features (streams, springs, ponds, watershed boundaries, etc), 4) Both existing and planned drainage control features, including sediment ponds, diversion channels or berms (to minimize run-on and control run-off), channels down dump faces, culverts (including size), and storm water ponds, 5) Process ponds, storage tanks, and other water-containing structures, 6) Treatment wetlands, 7) Water wells, 8) Deleterious and acid-forming materials (including fuel and chemicals), 9) The direction of drainage flow, and 10) Other pertinent hydrologic features. Other maps from the Notice have some of this information, but are significantly out of date and/or are difficult to read. It may be that an existing map prepared as part of a current storm water pollution prevention plan (SWPPP) shows most of these features.	pnb	
15	Omission	Provide a reclamation treatments map identifying: 1) Reclamation activities associated with mine features and consistent with the reclamation plan (such as grading and ripping slopes on contour, broadcast or drill seeding, capping leach pads, etc.), 2) Features to remain after reclamation, including pits and any impoundments or drainage control structures (such as berms around pit highwalls), 3) Deleterious or acid-forming materials generated and left on-site after completion of reclamation, and 4) Other pertinent reclamation treatments.	pnb	

105.5 – Underground and Surface Mine Development Maps

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
16	Figure 3	Please adjust the east boundary of Dump A to include the deposited material that is shown on the aerial image. Adjust the acreage of the Dump A footprint.	mpb	
17	Figure 3	The center of the south boundary of the Centennial pit should be adjusted to include the pit area that is currently shown outside the boundary. Adjust acreage of Centennial pit footprint if necessary.	mpb	
18	Figure 3	The Centennial pit and Dump B boundaries overlap. This will not be the case at the mine's end-of-life, and it indicates a potential for duplication of disturbed area in the acreage calculations. Please adjust the boundaries to remove overlap. Adjust disturbed area calculations if necessary.	mpb	

R647-4-106 - Operation Plan

General Operation Comments

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
19	Pg 9 of 36	Table 1 shows "2012 Proposed Amendment" for the expansion of Dump B. This amendment was approved on October 3, 2012. Please show this amendment as "approved."	mpb	

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
20	Omission	Table 1 does not show the proposed amendment to partially backfill the Centennial Pit. Please include this amendment in the table, and show it as "approved."	mpb	

106.2 - Type of operations - mining method, onsite processing, deleterious or acid-forming materials

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
21	Page 11	The bottom paragraph references a "Waste Rock Management Plan" as part of the 2013 annual Waste Rock Monitoring Report. The Division requests that LVMC develop and submit a stand-alone Waste Rock Management Plan (WRMP) to be an appendix of the NOI to be referenced in this section (see comment 30 below). The WRMP would serve as the basis for the annual Waste Rock Monitoring Reports. The plan could be extracted from the annual Waste Rock Monitoring Reports with a few enhancements. Benefits of providing the WRMP would be to reduce the volume of the annual monitoring reports and simplify both the work load on the operator and the review time needed for the annual reports.	mpb	
22	Page 11, Table 3	Please provide a color-coded stratigraphic column to accompany this table that delineates overburden, waste rock, and ore-bearing members by bed number.	mpb	
23	Page 11, Table 3	As it is unusual for Bed 14 (limestone) and Bed 15 (sandstone) to be categorized as the same rock type (Rock Type 7), the Division considers Bed 15 to be a separate rock type for purposes of materials handling since these two beds have differing chemical properties, and have differing base matrices (sandstone vs. limestone). In consultation with the BLM, the Division requests that you do away with the entire "Rock Type" designation scheme and only use the Bed numbering system in future reports and submittals. (See comment 33.)	pnb/ mpb	
24	Page 13	Referring to the Heap Leach Pad description, the final sentence in the first paragraph says "Stages –III are complete…" This appears to be a typographical error. The Division understands that Stages I through III are complete, but the typographic correction helps clarify this to the reader unfamiliar with the status.	mpb	
25	Page 13	In the "Pit Backfill" section, please discuss any use of the Sentinel and GTO pits for waste rock deposition, past, present and/or proposed.	mpb	
26	Page 13	Instead of providing a range of backfill tonnages, identify what minimum backfill volume (or converted to tons) is required in order to backfill the planned Centennial pit to an elevation 10 feet above the pre-mining groundwater elevation.	pnb	
27	Page 14	Identify any other deleterious materials that are present or will be left onsite as a result of mining or mineral processing (which includes leached ore). Deleterious materials also include introduced materials (e.g. processing chemicals, fuels, etc) that would likely produce conditions detrimental to biota or hydrologic systems.	pnb	

106.3 - Estimated acreages disturbed, reclaimed, annually/sequentially

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
28	Table 6, Page 15	After revising maps as indicated above, please recalculate the disturbed acreages shown in this table and elsewhere as necessary.	mpb	

106.4 - Nature of materials mined or processed (including waste materials), and estimated annual tonnages

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
29	Page 16, Omission	In an appendix, include the tabulated and updated historical geochemistry data from the most recent annual waste rock monitoring report, and refer to it in this section. Considering the definition of deleterious materials, summarize and briefly discuss in section 106.4 the findings of the elemental analyses, acid-base analyses, meteoric water mobility procedure tests, and also the recent kinetic tests. Call Peter Brinton for more specific information.	pnb	
30	Page 16, Omission	Please include a Waste Rock Management Plan (WRMP) as an appendix, and briefly summarize and refer to it in this section (see comment 21 above). The plan should identify and discuss the following: 1) Criteria for classification of material as acid-forming and deleterious (including for leachability of metals), 2) The findings of the various geochemical analyses done to date (e.g. column studies, acid base analyses, leach tests, elemental analyses, etc.), 3) Beds and Rock Types that are handled as if they are deleterious or acid forming (specifically whether Rock Types 3, 4, and 5 and any of their specific beds should be encapsulated or otherwise handled differently), 4) Beds that are appropriate for encapsulating deleterious materials (such benign materials having an acid neutralization potential that is three times the acid generation potential), 5) Beds are neither deleterious/acid-forming nor appropriate for encapsulating (such as those having a relatively low net neutralization potential or ratio), 6) Methods (e.g. visual, testing) to identify different beds or materials. 7) Material handling methods used to avoid or mitigate impacts associated with deleterious and/or acid-forming materials. For example, best practices are to encapsulate acid forming material with a specified thickness of benign waste rock having a certain minimum level of neutralization potential, and 8) Discussion of the annual waste rock sampling plan and reporting.	pnb	
31	Page 16, Omission	Estimate the annual tonnages of acid forming, encapsulating, and other waste materials, such as by estimating the annual material to be mined in each bed.	pnb	
32	Page 17, Table 8	Please add the following to the existing table: 1) percent of total and/or sulfide sulfur, 2) the acid generation potential (in units such as tons CaCO3/ton), 3) the acid neutralization potential (in units such as tons CaCO3/ton), 4) the number of samples from each rock type (and bed if known), and 5) the results of these analyses by bed, where possible.	pnb	
33	Page 17, Table 8	Rock Type 7 (Beds 14 & 15) is "Likely Acid Neutralizing", but Bed 15 has a significantly different chemical composition and neutralization capacity. Beds 14 and 15 should have separate rock type designations (see comment #23 in Section 106.2).	mpb/ pnb	

106.5 - Existing soil types, location, amount

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
34	Page 17	Sloping of stockpiled soil (together with revegetation) will minimize erosion, but it will not "prevent" erosion. The Division recommends that the word "prevent" be changed.	pnb	

106.6 - Plan for protecting & re-depositing soils

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
35	Page 18, Table "8"	The table on the previous page is also labeled Table 8. Please coordinate the table numbering throughout.	mpb	

106.7 - Existing vegetation - species and amount

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
36	Pg. 18	This section refers to the FEIS. Refer to the date of the final FEIS (February 1997). The 1997 FEIS discusses vegetation in general terms and does not provide an accounting of vegetative cover within the permit area. The FEIS refers to a baseline vegetation study done by Woodward-Clyde in 1994, of which the Division does not have a copy. If a copy of the Woodward-Clyde survey is available, please include it in an appendix.	mpb	

106.8 - Depth to groundwater, extent of overburden, geologic setting

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
37	Page 18	Identify whether any pit backfilling may be below the existing or future water table, and discuss any past, current, and future dewatering requirements for each pit.	pnb	
38	Page 18	Regarding the Centennial pit, refer to the final report and date of the hydrological modeling of the backfill scenarios for more information. The NOI might also refer to previous reports.	pnb	
39	Page 19	Refer to the discussion on Page 11 of the different rock types; otherwise, this discussion could be moved here while leaving a brief statement on Page 11 about what acid forming materials are present or left on-site.	pnb	

106.9 - Location & size of ore & waste stockpiles, tailings & treatment ponds, and discharges

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
40	Page 20, para 4	Include the combined Net Neutralization Potential (NNP) value from section 6.1 of the final Centennial Pit backfill evaluation report, since the annual waste rock sampling plan referenced did not, alone, utilize all of the characterization methods identified (such as column testing). Indicate the ratio of Bed 14 to Bed 15 used in determining the combined NNP value.	pnb	
41	Page 20, para 5	Reference the final Centennial Pit backfill evaluation report as an appendix of this Notice.	pnb	
42	Page 20, para 5	Refer to section 109.1 for the discussion of impacts to groundwater, and remove such discussion (paragraph 5) from 106.9.		
43	Page 21, para 3	Instead of providing a range of backfill tonnages, identify what minimum backfill volume (or converted to tons) is required in order to backfill the planned Centennial pit to an elevation 10 feet above the pre-mining groundwater elevation. Update maps as needed.	pnb	

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
44	Omission	Provide a copy of the approved groundwater discharge permit (GWDP) from the Utah Division of Water Quality for inclusion as an appendix to the Notice. The text of the Notice will then be reviewed for consistency with the GWDP.	pnb	
45	Page 22	Remove the sentence identifying the facility as "zero-discharge", unless such a classification has been issued to LVMC by DEQ. The Division has been informed that there is a formal designation that they issue to such facilities.	pnb	

106.10 - Amounts of material extracted or moved (including ore, waste, topsoil, etc.)

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
46	Omission	Information to address this rule is missing. There are figures using both volume and mass throughout the NOI, but this section should be used to summarize the amounts of materials moved at the end of mine life. These are estimated figures. Annual figures should be provided in the annual reports.	mpb	

R647-4-108 - Hole Plugging Requirements

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
47	Update	Please provide a description of the proposed monitoring well installation for the pit backfill groundwater monitoring program, and map locations for the wells and include the new monitoring well plugging and abandonment costs in the bond calculations.	mpb	

R647-4-109 - Impact Assessment

109.1 - Projected impacts to surface & groundwater systems

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
48	Omission	Summarize projected impacts to groundwater from potential contaminant sources, including the solution ponds, the leach pad, pits, and storage of other deleterious materials, consistent with the findings of the groundwater discharge permit.	pnb	
49	Page 23	Discuss activities to mitigate and/or avoid impacts to surface water systems.	pnb	
50	Pages 23 & 24	Discuss activities to mitigate and/or avoid impacts to groundwater systems, such as leak detection systems, containment for tanks, and heap capping.	pnb	
51	Page 23, 1st Bullet	Since it appears that some inconsistencies exist between the conclusions of the Centennial Pit backfill evaluation report and the summary of anticipated impacts to water quality reported here, please provide a copy in an appendix of the BLM Proposed Action that is referenced in the footnotes as: "Lisbon Valley Mining Co 2015. Centennial Pit Partial Backfilling Revision 3 March 11, 2015." Once received, the Division will be able to complete a review of this section for consistency with the backfill evaluation report.	pnb	
52	Omission	Please provide in an appendix a copy of the BLM's most recent Record of Decision with regards to the NEPA analysis of the Centennial pit backfill plan.	pnb	
53	Omission	Discuss projected impacts associated with groundwater extraction for processing and other needs.	pnb	

109.3 - Projected impacts on existing soils resources

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
54	Page 25	Please include a description of how scavenged soil resources will be protected by temporarily seeding stockpiles to reduce erosion loss and preserve qualities as a growth medium.	pnb	

109.4 - Projected impacts on slope stability, erosion control, air quality, public health and safety

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
55	General comment on 109.4 and 109.5	Section 109.4 should describe the projected impacts to slope stability, erosion control, air quality, public health and safety. Section 109.5 should be used to describe measures to be used to mitigate these impacts.	mpb	
56	Page 26,	The second-to-last bullet about fencing and signing includes text in the form of a question that needs to be answered. This is assumed to have been something inadvertently copied and pasted into this line. Please remove it or provide proper context.	pnb	

109.5 - Actions to mitigate any impacts

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
57	Page 26	Discuss activities to mitigate and/or avoid erosion, such as diversion of potential run-on around mine disturbances and the construction of rip-rapped channels associated with waste rock dump slopes as a possible mitigation method for minimization of erosion off of dumps. Show locations of sediment traps and erosion control structures "installed as necessary."	pnb	
58	Page 26, Omission	Berms will need to be constructed above final pit walls to enhance public safety and to keep runoff from surrounding areas from entering the pit directly as a condition of the Centennial pit backfill approval. Please update the mitigation list accordingly.	pnb	

R647-4-110 - Reclamation Plan

110.1 - Current & post mining land use

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
59	Page 26	Please specify what types of recreation are considered as part of the current and post-mining land use.	mpb	

110.2 - Reclamation of roads, highwalls, slopes, impoundments, drainages, pits, piles, shafts, adits, etc

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
60	Page 27, para 3	The statements that groundwater pit pools will accumulate in all pits after groundwater levels recover is inconsistent with the discussion of the Centennial pit backfill. For each of the pits and considering their planned maximum depths, clarify whether pit lakes will develop or not, both in this section and in section 109.1.	pnb	

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
61	omission	Since the various pits will be reclaimed in different ways, a "one-size-fits-all" statement on final pit fates is not adequate. Please expand this section to give a brief description on how each pit will be left (no backfill, partial backfill, complete backfill, etc.).	mpb	
62	Page 27, para 4	Remove or modify the following statement: "Pit pools are authorized by the GWDP found in Appendix whatever" (emphasis added). Briefly discuss in this section the plans for pit backfilling concurrent with mining. This may refer to the Centennial pit backfill operation.	pnb	
63	Page 28, para 2	Provide a basis for the reclamation draindown time of 18 months. The BLM's Heap Leach Draindown Estimator model using appropriate variables would be an acceptable way to calculate a draindown time, which is an important element of the reclamation cost calculation.	pnb	
64	Page 28, para 3	Clarify whether the reduction of slopes to 3.5H:1V will result in leached ore being placed off-pad, and discuss the implications of the presence or lack of pad below the graded leached ore slopes.	pnb	
65	Page 28, para 3	Identify the thickness of the respective capping layers as this information is necessary for the reclamation cost estimate. There is also an unfinished either/or sentence in this paragraph: "This will either be done by the placement of compacted clay derived from Mancos shale" (emphasis added). Or what?	pnb/ mpb	

110.3 - Facilities to be left for post mining use (buildings, utilities, roads, pads, ponds, pits, equipment, etc.)

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
66	Page 28	This section states that all facilities will be demolished. UDAQ requires a pre-demolition inspection and report for any buildings to be demolished to identify and quantify any asbestos-containing materials (R307-801). UDEQ also requires that "universal hazardous wastes," such as lead-based paint, PCB-containing electrical transformers and ballasts, CFC-containing cooling units, mercury-containing thermostats and light bulbs, etc., be quantified, removed and disposed of properly (R315-16) prior to demolition. Both the pre-demo survey and costs for removing and disposal of any materials found needs to be included in the reclamation cost estimates.	mpb	

110.4 - Description or treatment/location/disposition of deleterious or acid forming materials, including map

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
67	Page 29, para 4	Best practices are to encapsulate acid forming material with rock having a certain minimum level of neutralization potential (such as material having an acid neutralization potential that is three times the acid generation potential), since not all net neutralizing material may have enough neutralization potential to ensure pH neutral conditions. Please modify the plan accordingly.	pnb	
68	Figure 3, Omission	On Figure 3, show the location of dumped deleterious or acid-forming materials upon the completion of final reclamation. For example, maps should identify the location of acid forming materials in the dumps, and deleterious leached ore.	pnb	

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
69		In this section of the NOI, please acknowledge the Mineral Rules definition of deleterious materials (i.e. "introduced materials"), which includes reagents, lubricants, fuels, asbestos-containing building materials, lead-based paint or any other hazardous material that requires extra expense for handling, removal and disposal should an operator abandon a mine. (See related Comment #11 in section 105.2.)	mpb	

110.5 - Revegetation planting program, topsoil, replacement, seed bed prep, seed mixtures, rates, timing, erosion control

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
70	Appx E, Reclamation Guidelines	Although in the past, the use of soil enhancements was a popular recommendation for revegetation of disturbed areas, the Division no longer recommends the use of either fertilizers or bio-solids since they tend to encourage weed growth before the desired species have a chance to establish. However, if using organic soil enhancements, please stipulate that they will conform to 40 CFR Part 503, R317-550, San Juan County Health Department, and any other applicable regulations.	mpb	

110.6 – Statement that the operator will conduct reclamation as required by these rules

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
71	Pages 30-31	The heading and first statement are repeated, once at the bottom of page 30 and again at the top of page 31. Please correct.	mpb	

R647-4-112 - Variance (List all variances requested and make a finding if approving.)

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
72	Omission	There were several variances requested and granted in the original NOI. Please include a list of the variances that have been granted to LVMC.	mpb	

R647-4-113 – Surety

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
73	Page 31	Robert Frayser is not currently listed with the Division of Corporations (DOC) as a principal authorized to sign the NOI, sureties and reclamation contracts. Please either have Ken Garnett sign these documents, or update LVMC's officers listed with the DOC, or provide a delegation of authority allowing Robert Frayser and/or Lantz Indergard to sign for LVMC.	mpb	
74		When calculating reclamation surety, please remember that the reclamation estimate must reflect a scenario where the operator is no longer on site to conduct the work and the State becomes responsible for hiring contractors from outside to reclaim the site.	mpb	
75		The final reclamation cost estimate will be conducted when all comments have been addressed and the NOI is ready for final approval.	mpb	
76		The operation time and equipment cost for heap leach draindown and evaporation of solution ponds should be calculated as part of the reclamation cost calculation.	pnb	

Figures and Appendices

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
77	Omission	Please add tabbed pages at the beginnings of the Figure section and each Appendix.	mpb	